

CLAIMS

1. A navigation apparatus, comprising:
a storage device in which first data and second data
that are a different type of data from the first data are stored;
5 and
a control device that controls road guidance including
map display by using the first data and the second data, wherein:
the control device updates the first data in a first
update unit and updates the second data in a second update
10 unit different from the first update unit.
2. A navigation apparatus according to claim 1, wherein:
the first data are related to map display;
the second data are related to road connections; and
15 the first update unit represents a predetermined map
range and the second update unit represents a range greater
than the predetermined map range.
3. A navigation apparatus according to claim 1, wherein:
20 the first data are background data used for map display;
the second data are at least one type of data among road
data used to locate a position on a road, route search data
used in route search and route guidance data used for route
guidance;

the first update unit represents a predetermined map range; and

the second update unit represents a range greater than the predetermined map range.

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4. A navigation apparatus according to claim 1, wherein:

the first data are at least one type of search data among name search data, telephone number search data and street address search data used to locate a position on a map;

10 the second data are at least one type of data among road data used to locate a position on a road, route search data used in route search and route guidance data used for route guidance;

the first update unit is set so as to update part of
15 the first data stored in the storage device; and

the second update unit corresponds to the entire first data stored in the storage device.

5. A navigation apparatus according to any of claims 1
20 through 3, wherein:

the second update unit corresponds to the entire first data stored in the storage device.

6. A navigation apparatus according to claim 4 or claim
25 5, wherein:

when new data are to be added to the first data, the control device adds the new data to the first data in the first update unit; and

when new data are to be added to the second data, the control device updates the entire second data stored in the storage device and adds the new data to the second data.

7. A navigation apparatus according to any of claims 1 through 6, further comprising:

an input device to which update data to be used to update the first data, output from an update data providing apparatus in the first update unit, and update data to be used to update the second data, output from the update data providing apparatus in the second update unit, are input.

8. A navigation apparatus according to any of claims 1 through 7, further comprising:

a navigation-side update specifying device that specifies at least either the first data or the second data as a type of data to be updated and an update range; and an output device that outputs to an update data providing apparatus information indicating the specified type of data to be updated and the update range.

9. An update data providing apparatus that provides update data to be used to update first data and update data to be used to update second data of a data type different from the first data to a navigation apparatus which controls road guidance including map display by using the first data and the second data, comprising:

an update data storage device in which the update data to be used to update the first data and the update data to be used to update the second data are stored; and

10 an update data output device that outputs to the navigation apparatus the update data for the first data in a first update unit and outputs to the navigation apparatus the update data for the second data in a second update unit different from the first update unit.

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10. An update data providing apparatus according to claim 9, wherein:

the first data are related to map display;

the second data are related to road connections; and

20 the first update unit represents a predetermined map range and the second update unit represents a range greater than the predetermined map range.

11. An update data providing apparatus according to claim 25 9, wherein:

the first data are background data used for map display;

the second data are at least one type of data among road data used to locate a position on a road, route search data used in route search and route guidance data used for route guidance;

the first update unit represents a predetermined map range; and

the second update unit represents a range greater than the predetermined map range.

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12. An update data providing apparatus according to claim 9, wherein:

the first data are at least one type of search data among name search data, telephone number search data and street address search data used to locate a position on a map;

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the second data are at least one type of data among road data used to locate a position on a road, route search data used in route search and route guidance data used for route guidance;

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the first update unit is set so as to update part of the first data stored in the storage device; and

the second update unit corresponds to the entire first data stored in the storage device.

13. An update data providing apparatus according to any of claims 9 through 11, wherein:

the second update unit corresponds to the entire first data stored in the navigation apparatus.

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14. An update data providing apparatus according to claim 12 or 13, wherein:

when new data are to be added to the first data at the navigation apparatus, the update data output device outputs
10 the new data to be added to the first data in the first update unit; and

when new data are to be added to the second data at the navigation apparatus, the update data output device outputs update data for the entire second data stored in the navigation
15 apparatus and the new data to be added to the second data.

15. An update data providing apparatus according to any of claims 9 through 14, further comprising:

an output specifying device that specifies either the
20 first data or the second data as a type of update data to be output to the navigation apparatus and an update range, wherein:

the update data output device outputs to the navigation apparatus update data of the specified data type over the
25 specified update range.

16. A data update system for a navigation apparatus
comprising:

a navigation apparatus according to any of claims 1
5 through 8; and

an update data providing apparatus according to any of
claims 9 through 15.

17. An update data providing method for providing update
10 data to be used to update first data and update data to be
used to update second data of a data type different from the
first data to a navigation apparatus that controls road
guidance including map display by using the first data and
the second data, comprising:

15 specifying at least either the first data or the second
data as a type of data to be updated and specifying an update
range;

outputting update data for the first data over the
specified update range in a first update unit to the navigation
20 apparatus if the first data are specified; and

outputting to the navigation apparatus the update data
for the second data over a range containing the specified update
range in a second update unit different from the first update
unit if the second data are specified.

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18. An update data providing method for providing update data to be used to update first data and update data to be used to update second data of a data type different from the first data to a navigation apparatus that controls road
5 guidance including map display by using the first data and the second data, comprising:

displaying a selection screen in which at least either the first data or the second data is selected as a type of data for data update;

10 displaying information indicating a storage state of at least either the first data or the second data at the navigation apparatus;

displaying an update range specification screen in which an update range over which at least either the first data or
15 the second data are to be updated is specified;

outputting the update data for the first data over the update range having been specified in the update range specification screen to the navigation apparatus in a first update unit if the first data are selected; and

20 outputting the update data for the second data over a range containing the update range having been specified in the update range specification screen to the navigation apparatus in a second update unit different from the first update unit if the second data are selected.